

09/035,136 (Grove et al.)

Attorney Docket Number 27916/128354

1. A foot flexion device for use by a patient, comprising at least one boot comprising
 - a calf member having a heel end and a knee end and constructed and arranged to support a calf portion of said patient's leg
 - a baseplate having a heel end and a toe end, wherein said calf [plate] member and said base plate are rigidly attached to one another at said heel ends,
 - a footplate having a footplate toe end and a footplate heel end, said footplate heel end being rotatably attached to said heel end of said baseplate so that said footplate may rotate with respect to said baseplate,
 - an inflatable bellows positioned between said baseplate and said footplate such that inflation of said bellows causes rotation of said footplate relative to said baseplate to effect flexion of said patient's foot when said foot is disposed on said footplate,
 - securing structure constructed and arranged to secure said patient's foot such that said footplate and foot move together,
 - a pump assembly for pumping fluid to said bellows to power movement of said footplate,
 - a controller operatively coupled to said pump assembly by at least one sensor constructed and arranged to sense and transmit a sensor signal from a muscle of said patient to said controller,
- wherein said controller is constructed and arranged to receive said signal and pause said pumping when said signal indicates that said muscle is contracting spontaneously or irregularly, and
wherein said knee end of said calf member does not extend higher than the knee of said patient.

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33 34. A foot flexion device for use by a patient, comprising
at least one boot comprising

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and arranged to support a calf portion of said patient's leg

a baseplate having a heel end and a toe end, wherein said calf
[plate] member and said base plate are rigidly attached to one another at
said heel ends,

a footplate having a footplate toe end and a footplate heel end,
said footplate heel end being rotatably attached to said heel end of said
baseplate so that said footplate may rotate with respect to said baseplate,

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an inflatable bellows positioned between said baseplate and said
footplate such that inflation of said bellows causes rotation of said
footplate relative to said baseplate to effect flexion of said patient's foot
when said foot is disposed on said footplate,

securing structure constructed and arranged to secure said
patient's foot such that said footplate and foot move together,

a pump assembly for pumping fluid to said bellows to power
movement of said footplate,

a controller operatively coupled to said pump assembly by at least
one switch constructed and arranged to be operable by an operator to
send a signal to said controller,

wherein said controller is constructed and arranged to receive said
signal and pause said pumping when said signal is received, and

wherein said knee end of said calf member does not extend higher than
the knee of said patient.